REMARKS

Claims 1-21 are now pending. The Office Action mailed on October 1, 2002 ("Office Action") objected to claims 1, 3, and 14 because of grammatical formalities. The Office Action rejected claims 1, 7, 16 and 19 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,097,338 to Kuriyama. Further, the Office Action rejected claims 1, 7, 8, 16 and 19 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,204,982 to Cooperman. Still further, the Office Action also rejected claims 1 and 4 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,452,151 to Tamagawa. Additionally, the Office Action has objected claims 2-3, 4-6, 9-15, and 17-18 as being dependent on rejected claims but would be allowable if rewritten to include all the limitations of the respective base claim and any intervening claim. Finally, the Office Action has indicated that claims 20-21 are allowable. The Applicants respectfully disagree with the rejection of claims 1-19 as reasons are discussed below as to why pending claims 1-19 are also in condition for allowance.

Claim Objection of claims 1, 3, and 14 for Informality

Applicants have corrected the grammatical errors pointed out by the Examiner with respect to claims 1 and 14, however, the applicants do not find the grammatical error referenced on line 3 in claim 3. Perhaps the Examiner meant to point out the similar error in line 3 of claim 7. In any case the grammatical error in line 3 of claim 7 has been amended as well as other grammatical informalities.

Rejection of Claims 1, 4, 7, 8, 16 and 19 Under 35 U.S.C. §§ 102(b) and 102(e)

The Office Action has rejected claims 1, 4, 7, 8, 16, and 19 under 35 U.S.C. §§ 102(b) and 102(e) as anticipated by U.S. patents to Kuriyama, Cooperman, and Tamagawa.

The Office Action states that in the first reference cited, Kuriyama discloses in FIG. 8, a circuit comprising an actual switch (SW1-SW64) coupled to receive an input signal sequence that indicates a set of transitions associated with the actual switch and

dummy switch (DSW) coupled to receive a dummy signal that indicates a set of state transitions associated with the dummy switch, wherein the dummy signal sequence indicates state transitions that are mutually exclusive of state transitions indicated by the input signal sequence. Column 7, lines 5-7 of Kuriyama are referenced. Applicants respectfully disagree.

The cited lines of Kuriyama state that a dummy switch (DSW) is operated simultaneously with, not mutually exclusive of, the analog switches (SW1-SW64). The operation of the dummy switches is indicated in FIG. 7 in a timing diagram, where it is shown that the switching noise of actual switch (SW) and the switching noise of the dummy switch (DSW) occur at the same time but with reversed phase, such that the switching noise at V_o is maintained close to zero. Consequently, the actual switching of the analog switch (SW) and the dummy switch (DSW) must occur simultaneously so as to cancel the switching noise.

Conversely, claim 1 recites a switched current steering device having an actual switch and a dummy switch, wherein the dummy signal sequence for the dummy switch indicates state transitions that are mutually exclusive of state transitions indicated by the input signal sequence to the actual switch. Thus, the actual switch and the dummy switch are not switched simultaneously, but are instead switched separately. Therefore, claim 1 as well as dependant claims 2-6 are clearly and patentably distinguishable over Kuriyama.

The Office Action also states that claims 1, 7, 8, 16, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Cooperman. The Office Action purports that Cooperman discloses, in FIG. 8, a circuit comprising an actual switch (38) and a dummy switch (81), and a dummy signal sequence indicates state transitions that are mutually exclusive of state transitions indicated by the input signal sequence. Column 2, lines 9-13 of Cooperman are referenced. Applicants respectively disagree.

FIG. 7 of Cooperman clearly shows the switching patterns for the actual switch (output 38) and the dummy switch (dummy output 81). In the timing diagram, it is clear

that the actual switch turns on at the same time that the dummy switch turns off. Likewise, it is also shown that when the actual switch turns off the dummy switch turns on. Thus, the switching pattern of the actual switch and the dummy switch is simultaneous, not mutually exclusive. Therefore, claim 1, as well as dependant claims 2-6, are clearly and patentably distinguishable over Cooperman.

Finally the Office Action states that claims 1 and 4 are rejected under 35 U.S.C 102(e) as being anticipated by Tamagawa. Specifically, the Office Action purports that Tamagawa discloses in FIG. 7, a circuit comprising an actual switch (C1-CN) and a dummy switch (CO) wherein the dummy signal sequence indicates state transitions are mutually exclusive of state transitions indicated by the input signal sequence. No reference to the detailed description of Tamagawa is provided. Applicants respectively disagree.

Column 7, lines 54-64 of Tamagawa, in conjunction with FIG. 6, clearly states that the switching transistor (C0) is turned off at the same time that the first switching transistor (C1) is turned on. Per above, this is simultaneous, not mutual exclusive, switching as recited in claim 1. Therefore, claim 1 as well as dependant claims 2-6 are patentably distinguishable over Tamagawa.

The Office Action also states that independent claims 7 and 16 as well as dependant claims 8 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by either Kuriyama or Cooperman. The Office Action cites specific references within Kuriyama and Cooperman that are identical to those cited above with respect to claim 1. Like claim 1, claims 7 and 16 recite mutual exclusive switching, which are not taught or suggested by either Kuriyama or Cooperman. Thus, for reasons similar to those recited above in support of the patentability of claim 1, independent claim 7, as well as dependant claims 8-15, and independent claim 16, as well dependant claims 17-19, are patentably distinguishable over both Kuriyama and Cooperman.

CONCLUSION

In light of the foregoing and in addition to allowed claims 20-21, claims 1-19 as previously pending are in condition for allowance, and that action is respectfully requested.

In the event an additional fee is due for this Response, you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

Respectfully submitted,

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